

# Research on Incentive Mechanism for Graduate Students' Research and Innovation in the Context of Educational Powerhouse

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**Abstract:** In the context of a strategic vision of education as a driver of national strength, the optimisation of incentive mechanisms for postgraduate research innovation has emerged as a key area of focus within the current education policy landscape. The issues and underlying causes are examined in detail from a range of perspectives, including Policy and regulations, academic environment, Incentive mechanism, Mentor support. Ultimately, recommendations are presented regarding the improvement of the incentive mechanism, the reinforcement of tutor guidance, the optimisation of the evaluation system. These suggestions aim to provide theoretical and practical guidance for the optimisation of postgraduate research and innovation incentives, thereby enhancing the capabilities of postgraduate scientific research and innovation.

**Keywords:** Stronger Education; Postgraduate students; Research Innovation; Incentive Mechanism

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## 1. Importance of Postgraduate Research Innovation in the Context of a Strong Educational State

The higher education sector in China has undergone a period of rapid development since the implementation of the reform and opening up policy. In recent years, the number of postgraduate students enrolled in China's colleges and universities has increased exponentially, with a growth rate exceeding 50% over the past five years. China has become a country with a high number of postgraduate students. However, as higher education becomes more widely available, there is a challenge to ensure that the quantity and quality of education are not in conflict with one another. The expansion of postgraduate enrolment has the dual benefit of meeting the social demand for highly educated talent and stimulating discussion about the academic quality and innovation ability of postgraduates.

### 1.1 Importance of Postgraduate Research Innovation in the Context of Educational Strengths

China's comprehensive national power and world influence are increasing, but it is facing a complex and changing international and domestic environment, and international competition is becoming more and more intense, so improving scientific and technological innovation capacity has become an important way to achieve the goal of a strong scientific and technological country. By stimulating the innovation potential of postgraduates, it promotes the improvement of the national level of scientific and technological innovation, and facilitates the continuous emergence and transformation of scientific research achievements. Driven by the wave of globalisation, the competition for talents and students among countries has become more internationalised, and the enhancement of the country's scientific and technological innovation capability is the key to maintaining its international competitive advantage.

### 1.2 Promoting industry-university-research cooperation and academic progress

Postgraduate students are the backbone of scientific and technological innovation, the backbone of China's scientific and technological progress and achievement transformation, and their scientific research and innovation ability directly affects the level of national scientific and technological development, therefore, the incentive mechanism for postgraduate students to innovate is designed to better adapt to the needs of talent cultivation, in order to meet the urgent need of the country to cultivate high-quality innovative talents more effectively.

## 2. The current situation of incentive mechanisms for postgraduate research and innovation

### 2.1 Policy and regulations

The State Council approved the Ministry of Education's 2003-2007 Education Revitalisation Action Plan, which put forward the "Innovation Plan for Postgraduate Education". It points out that it is necessary to establish a postgraduate education system and operation mechanism compatible with the socialist market economy system; to increase the construction of postgraduate training bases to improve training conditions and promote the sharing of high-quality resources; to establish an incentive mechanism for postgraduates' scientific research and

innovation to cultivate a sense of creativity, a spirit of innovation and the ability to innovate and to create an atmosphere of innovation; and to endeavour to lay a solid foundation of human resources for the implementation of the strategy of developing the country through science and education and the strategy of strengthening the country by talents to ensure the quality of China's postgraduate training and the overall level of postgraduate education approach or reach the level of developed countries<sup>[1]</sup>.

## **2.2 The academic environment**

Human development cannot be separated from the environment, and the academic environment in colleges and universities can only be created by the joint efforts of teachers, administrators and students<sup>[2]</sup>. Through in-depth exchanges with international and domestic counterparts, we can not only broaden our knowledge horizons, but also stimulate innovative thinking and thus promote the development of science and technology.

## **2.3 Incentive mechanism**

At present, various types of postgraduate training units, which are mainly based on the scholarship incentive system, have generally set up various forms of incentive mechanisms, including general scholarships, individual merit scholarships and special social scholarships. However, from the point of view of the declaration process of the implementation of the innovation fund in each university, more than half of the innovation projects are not funded, and the demand for postgraduates' innovation projects can not be well satisfied, which hinders the passion of postgraduates' innovation.

## **2.4 Mentor support**

The role of the supervisor in postgraduate training is pivotal. The influence of supervisors on the innovation of postgraduates is mainly reflected in the supervisory system, training methods and the assistance provided to postgraduates at various stages of their academic journey. Several studies have shown that supervisory support can effectively promote the improvement of graduate students' innovation ability.

# **3. Problems and Reasons for the Incentive Mechanism for Postgraduate Research and Innovation**

## **3.1 Inadequate incentives**

Graduate student incentives represent an all-encompassing educational mechanism that motivates and guides graduate students to complete their training goals through the implementation of systematic rewards<sup>[3]</sup>. Innovative postgraduate incentives are still lacking among existing postgraduate students. Material rewards are emphasised over spiritual rewards. According to Maslow's hierarchy of needs theory, after people's low-level needs are satisfied, it is difficult to drive up their enthusiasm. On the contrary, people's pursuit of high-level needs is endless, and such needs can produce a lasting and powerful motivational effect<sup>[4]</sup>. Excessively favouring material rewards and neglecting the spiritual level of motivation not only makes it difficult to form a lasting and effective motivational effect, but may also adversely affect students' values and outlook on life.

## **3.2 Inadequate mentoring and training**

The existing postgraduate training structure is mainly centred on the guidance of a single supervisor. Due to the uneven quality of the supervisory team, the uneven quality of the supervisory team, and the relatively homogeneous research direction, such a single supervisory approach may restrict the overall development of postgraduates, leading to their limited vision and the research ideas becoming rigid, which in turn inhibits their learning and scientific innovation ability. In addition, the current treatment of university staff is generally low, which makes the self-worth of postgraduate tutors not properly reflected in the salary income, leading to the instability of the tutor team and serious brain drain.

## **3.3 Unequal distribution of resources**

The education administration decides on the allocation of resources only on the basis of their value and demand, and once the resources are allocated, they are fixed to a particular university and difficult to move. A major problem with the allocation of resources for postgraduate education is that it focuses too much on the static value of resources and ignores their dynamic benefits, leading to inefficient use of resources.

# **4. Incentive Mechanism and Countermeasures for Postgraduate Research and Innovation in the Context of a Strong Educational State**

## **4.1 Improvement of the incentive mechanism for scientific research and innovation**

In the process of building an incentive mechanism for postgraduate research and innovation, it is necessary to implement "flexible and applicable" incentives such as differentiated evaluation and assessment methods. It is necessary to assess both the scientific research results and the scientific research results achieved, and to assess the contribution to innovation in this field; to encourage new research in cross-disciplines, and to give key support; to create a benign environment for those who are capable of doing so, and to increase the material incen-

tives for scientific research and innovation, in particular to increase the remuneration of postgraduates for engaging in scientific research and innovation, and to formulate a set of incentives for postgraduates for engaging in scientific research and innovation.

#### **4.2 Playing the role of mentorship**

The influence of tutors on postgraduates is all-round, tutors should establish a good relationship with students, guide postgraduates to participate more in innovative practices, communicate and help them in time on some difficult problems in scientific research activities, and effectively improve their innovative ability. The implementation of the incentive mechanism for postgraduate students must give full play to the enthusiasm of the tutors, who need to enhance the sense of responsibility and give timely counselling and assistance.

#### **4.3 Optimising the academic evaluation and monitoring system**

First of all, it is important to organise the awards meeting in a dignified and enthusiastic manner. The awards are widely publicised through the campus network, school magazines, radio and television stations to further highlight the awards and the importance of the awards.

Secondly, after the evaluation and presentation of the awards, continuous tracking and investigation of the awardees is of vital importance. Close attention should be paid to the actual performance of graduated postgraduates in all walks of life. Feedback is collected and analysed through a systematic approach.

Finally, the incentive selection mechanism must be pragmatic and effective. It must be implemented in strict accordance with the relevant documents to ensure that the selection mechanism plays its due role, in order to truly stimulate the enthusiasm of the majority of postgraduate students.

### **5. Conclusion**

A vibrant academic atmosphere and a perfect innovation mechanism provide a stage for postgraduates to show their talents. Strong support from supervisors, perfect resource allocation and reasonable evaluation criteria provide a solid foundation for postgraduates to fully stimulate their potential and push them to continuously pursue excellence, contribute to the development of the academic world, and promote the sustainability of the cause of a strong education nation.

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